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(Modified) PTO/SB/21 (6-98)  
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# TRANSMITTAL FORM

(to be used for all correspondence after initial filing)

<b>Application Number</b>	09/817,015		
	<b>Filing Date</b>	March 23, 2001	
	<b>First Named Inventor</b>	Willem P.C. Stemme	
	<b>Group Art Unit</b>	Unassigned	
	<b>Examiner Name</b>	Unassigned	
<b>Total Number of Pages in This Submission</b>	7	<b>Attorney Docket Number</b>	02-104720US

## ENCLOSURES (check all that apply)

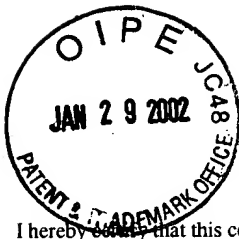
<input type="checkbox"/> Fee Transmittal Form	<input type="checkbox"/> Assignment Papers (for an Application)	<input type="checkbox"/> After Allowance Communication to Group
<input type="checkbox"/> Fee Attached	<input type="checkbox"/> Drawing(s)	<input type="checkbox"/> Appeal Communication to Board of Appeals and Interferences
<input type="checkbox"/> Amendment / Response	<input type="checkbox"/> Licensing-related Papers	<input type="checkbox"/> Appeal Communication to Group (Appeal Notice, Brief, Reply Brief)
<input type="checkbox"/> After Final	<input type="checkbox"/> Petition Routing Slip (PTO/SB/69) and Accompanying Petition	<input type="checkbox"/> Proprietary Information
<input type="checkbox"/> Affidavits/declaration(s)	<input type="checkbox"/> Petition to Convert to a Provisional Application	<input type="checkbox"/> Status Letter
<input type="checkbox"/> Extension of Time Request	<input type="checkbox"/> Power of Attorney, Revocation Change of Correspondence Address	<input checked="" type="checkbox"/> Additional Enclosure(s) (please identify below): receipt acknowledgment postcard
<input type="checkbox"/> Express Abandonment Request	<input type="checkbox"/> Terminal Disclaimer	
<input checked="" type="checkbox"/> Information Disclosure Statement	<input type="checkbox"/> Small Entity Statement	
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<input type="checkbox"/> Response to Missing Parts/ Incomplete Application	<b>Authorization to Charge Deposit Account</b> Please charge Deposit Account No. 50-0893 for any additional fees associated with this paper or during the pendency of this application, including any extensions of time for consideration of the documents enclosed.	
<input type="checkbox"/> Response to Missing Parts under 37 CFR 1.52 or 1.53	Remarks	

## SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT

Firm or Individual name	Jonathan Alan Quine, Reg. No. 41,261, Quine Intellectual Property Law Group P.C.		
Signature			
Date	1-18-02		

## CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Assistant Commissioner for Patents, Washington, D.C. 20231 on this date: January 18, 2002			
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By Deborah Berwick  
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Attorney Docket No. 02-104720US  
Client Ref. No. 0127.310US

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:

Willem P.C. Stemmer, *et al.*

Application No.: 09/817,015

Filed: March 23, 2001

For: METHODS FOR MODULATING  
CELLULAR AND ORGANISMAL  
PHENOTYPES

Examiner: Unassigned

Art Unit: Unassigned

INFORMATION DISCLOSURE  
STATEMENT UNDER 37 CFR § 1.97 and  
§ 1.98

Assistant Commissioner for Patents  
Washington, D.C. 20231

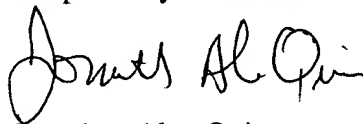
Sir:

The references cited on attached form PTO-1449 are being called to the attention of the Examiner. Copies of the references are enclosed. It is respectfully requested that the cited information be expressly considered during the prosecution of this application, and the references be made of record therein and appear among the "references cited" on any patent to issue therefrom.

As provided for by 37 CFR 1.97(g) and (h), no inference should be made that the information and references cited are prior art merely because they are in this statement and no representation is being made that a search has been conducted or that this statement encompasses all the possible relevant information.

Applicant believes that no fee is required for submission of this statement, since it is being submitted prior to the first Office Action. However, if a fee is required, the Commissioner is authorized to deduct such fee from the undersigned's Deposit Account No. 50-0893. Please deduct any additional fees from, or credit any overpayment to, the above-noted Deposit Account.

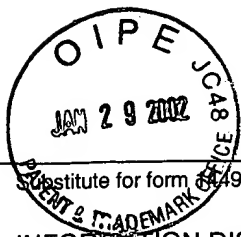
Respectfully submitted,

A handwritten signature in black ink, appearing to read "Jonathan Alan Quine". The signature is fluid and cursive, with the first name "Jonathan" and last name "Quine" clearly distinguishable.

Jonathan Alan Quine  
Reg. No. 41,261

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JAQ:db



<b>Substitute for form PTO/SB/08A-B/PTO</b> <b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  (use as many sheets as necessary)	<b>Complete if Known</b>	
	Application Number	09/817,015
	Filing Date	March 23, 2001
	First Named Inventor	William P.C. Stimmer
	Group Art Unit	Unassigned
	Examiner Name	Unassigned
	Attorney Docket Number	02-104720US

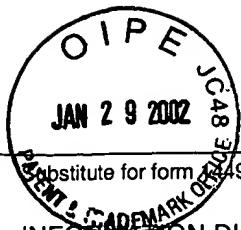
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U.S. PATENT DOCUMENTS						
Examiner Initials	Cite No.	U.S. Patent Document		Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appeal
		Number	Kind Code (if known)			
	AA	5,756,316		Schellenberger	05-26-1998	
	AB	5,783,431		Thompson et al.	07-21-1998	
	AC	5,798,208		Crea	08-25-1998	
	AD	5,824,485			10-20-1998	
	AE	5,830,650		Crea	11-03-1998	

FOREIGN PATENT DOCUMENTS								
Examiner Initials	Cite No.	Foreign Patent Document			Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T
		Office	Number	Kind Code (if known)				
	AF	EP	0527809	B1	Crea	10-171991		
	AG	WO	00/00632	A1	Phylos, Inc.	01-06-2000		
	AH	WO	00/04190	A1	Maxygen, Inc.	01-27-2000		
	AI	WO	00/09679	A1	Proteus	02-24-2000		
	AJ	WO	00/09682	A1	Affholter et al.	02-24-2000		
	AK	WO	00/18906	A2	Maxygen, Inc.	04-06-2000		
	AL	WO	00/42559	A1	Maxygen, Inc.	07-20-2000		
	AM	WO	00/61740	A1	Maxygen, Inc.	10-19-2000		
	AN	WO	01/12791	A1	Maxygen, Inc.	02-22-2001		
	AO	WO	01/23401	A2	Maxygen, Inc.	04-05-2001		
	AP	WO	01/23401	A3	Maxygen, Inc.	04-05-2001		
	AQ	WO	01/38504	A2	Maxygen, Inc.	05-31-2001		
	AR	WO	01/38513	A2	Maxygen, Inc.	05-31-2001		
	AS	WO	01/64864	A2	Maxygen, Inc.	09-07-2001		
	AT	WO	95/22625	A1	Stemmer et al.	08-24-1995		
	AU	WO	96/33207	A1	Glaxo Group Limited	10-24-1996		
	AV	WO	97/35957	A1	Maxygen, Inc.	10-02-1997		
	AW	WO	98/42727	A1	SRI International	10-01-1998		

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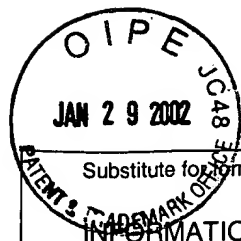
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	Group Art Unit	Unassigned
	Examiner Name	Unassigned
	Attorney Docket Number	02-104720US

OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS			
Examiner Initials	Cite No.	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T
	AX	ARKIN & YOUNG (1992) "An Algorithm for protein engineering: Simulations of recursive ensemble mutagenesis." <i>Proc. Nat'l Acad. Sci. USA</i> 89:7811-7815	
	AY	ARKIN AND YOUNG (1992) "Optimizing nucleotide mixtures to encode specific subsets of amino acids for semi-random mutagenesis." <i>Biotechnology</i> 10:297-300	
	AZ	ARNOLD (1993) "Protein engineering for unusual environments." <i>Current Opinion in Biotechnology</i> 4:450-455	
	BA	BASS ET AL. (1998) "Mutant Trp repressors with new DNA-binding specificities." <i>Science</i> 242:240-245.	
	BB	BAULCOMB (1999) <i>Current Opinion in Plant Biology</i> 2:109	
	BC	BOTSTEIN & SHORTLE (1985) "Strategies and applications of in vitro mutagenesis." <i>Science</i> 229:1193-1201.	
	BD	BREYER AND SAUER (1989) "Mutational analysis of the fine specificity of binding of monoclonal antibody 51F to lambda repressor." <i>J. Biol. Chem.</i> 264:13355-13360.	
	BE	CAPONIGRO ET AL. (1998) "Transdominant genetic analysis of a growth control pathway." <i>Proc. Natl. Acad. Sci USA</i> 95:7508-7513	
	BF	CARTER (1986) "Site-directed mutagenesis." <i>Biochem J.</i> 237:1-7.	
	BG	CARTER (1987) "Improved oligonucleotide-directed mutagenesis using M13 vectors." <i>Methods in Enzymol.</i> 154:382-403.	
	BH	CARTER ET AL. (1985) "Improved oligonucleotide site-directed mutagenesis using M13 vectors." <i>Nucl. Acids Res.</i> 13:4431-4443.	
	BI	DALE ET AL. (1996) "Oligonucleotide-directed random mutagenesis using the phosphorothioate method." <i>Methods Mol. Biol.</i> 57:369-374.	
	BJ	DELGRAVE & YOUNG (1993) "Searching Sequence Space to Engineer Proteins: Exponential Ensemble Mutagenesis." <i>Biotechnology Research</i> 11:1548-1552.	
	BK	EGHTEDARZADEH & HENIKOFF (1986) "Use of oligonucleotides to generate large deletions." <i>Nucl. Acids Res.</i> 14(12):5115.	
	BL	FRITZ ET AL. (1988) "Oligonucleotide-directed construction of mutations: a gapped duplex DNA procedure without enzymatic reactions in vitro." <i>Nucl. Acids Res.</i> 16(14):6987-6999	
	BM	GRUNDSTROM ET AL. (1985) "Oligonucleotide-directed mutagenesis by Microscale 'shot-gun' gene synthesis." <i>Nucl Acids Res.</i> 13:3305-3316.	
	BN	JORGENSEN ET AL. (1996) "Epigenetic Mechanism of Gene Regulation." <i>Russo, Martienssen and Riggs, eds. Pp. 393-402</i>	

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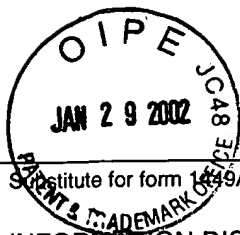
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Substitute for form 1449A-B/PTO <b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  (use as many sheets as necessary)	Complete if Known	
	Application Number	09/817,015
	Filing Date	March 23, 2001
	First Named Inventor	William P.C. Stimmer
	Group Art Unit	Unassigned
	Examiner Name	Unassigned
	Attorney Docket Number	02-104720US

BO	KRAMER & FRITZ (1987) "Oligonucleotide-directed construction of mutations via gapped duplex DNA." <i>Methods in Enzymol</i> 154:350-367.	
BP	KRAMER ET AL. (1984) "Point Mismatch Repair." <i>Cell</i> 38:879-887	
BQ	KRAMER ET AL. (1984) "The gapped duplex DNA approach to oligonucleotide-directed mutation construction." <i>Nucl. Acids Res.</i> 12(24):9441-9456.	
BR	KRAMER ET AL. (1988) "Improved enzymatic in vitro reactions in the gapped duplex DNA approach to oligonucleotide-directed construction of mutations." <i>Nucleic Acids Research</i> 16(14): 7207.	
BS	KUNKEL (1985) "Rapid and Efficient site- specific mutagenesis without phenotype selection." <i>Proc. Natl. Acad. Sci. USA</i> 82:488-492.	
BT	KUNKEL (1987) "The efficiency of oligonucleotide directed mutagenesis." <i>Nucleic Acids &amp; Molecular Biology</i> 2:124-135.	
BU	KUNKEL ET AL. (1987) "Rapid and efficient site-specific mutagenesis without phenotypic selection." <i>Methods in Enzymol</i> 154:367-382.	
BV	LEUNG ET AL. (1989) "A Method for random mutagenesis of a defined DNA segment using a modified Polymerase chain reaction." <i>Techniques</i> 1:11-15	
BW	LIM AND SAUER (1991) "The role of internal packing interactions in determining the structure and stability of a protein." <i>J. Mol. Biol</i> 219:359-376.	
BX	LING ET AL. (1997) "Approaches to DNA mutagenesis: an overview." <i>Anal Biochem</i> 254(2): 157-178.	
BY	MADHANI AND FINK (1997) "Combinatorial Control Required for the Specificity of Yeast MAPK Signaling." <i>Science</i> 275:1314-1317	
BZ	MANDECK "Oligonucleotide-directed double-strand break repair in plasmids of <i>Escherichia coli</i> : a method for site-specific mutagenesis." <i>Proc. Nat'l. Acad. Sci. USA</i> 83:7177-7181.	
CA	NAKAMAYE & ECKSTEIN (1986) "Inhibition of restriction endonuclease Nci I Cleavage by phosphorothioate groups and its applications to oligonucleotide-directed mutagenesis." <i>Nucl. Acids Res.</i> 14:9679-9698.	
CB	NAMBIAR ET AL. (1984) "Total synthesis and cloning of a gene coding for the ribonuclease S protein." <i>Science</i> 223:1299-1301.	
CC	OSTERMEIER ET AL (1999) "A combinatorial approach to hybrid enzymes independent of DNA homology." <i>Nature Biotech</i> 17:1205-1209	
CD	OSTERMEIER ET AL (1999) "Incremental Truncation as a Strategy in the Engineering of Novel Biocatalysts." <i>Biological and Medicinal Chemistry</i> 7: 2139-2144.	
CE	OSTERMEIER ET AL. (1999) "Combinatorial Protein Engineering by Incremental Truncation." <i>Proc. Nat'l Acad. Sci. USA</i> 96:3562-3567.	

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Substitute for form 1449A-B/PTO  <b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  <i>(use as many sheets as necessary)</i>	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th colspan="2" style="text-align: left; padding: 2px;">Complete if Known</th> </tr> <tr> <td style="width: 50%; padding: 2px;">Application Number</td> <td style="padding: 2px;">09/817,015</td> </tr> <tr> <td style="padding: 2px;">Filing Date</td> <td style="padding: 2px;">March 23, 2001</td> </tr> <tr> <td style="padding: 2px;">First Named Inventor</td> <td style="padding: 2px;">Will m P.C. St mm r</td> </tr> <tr> <td style="padding: 2px;">Group Art Unit</td> <td style="padding: 2px;">Unassign d</td> </tr> <tr> <td style="padding: 2px;">Examiner Name</td> <td style="padding: 2px;">Unassigned</td> </tr> <tr> <td style="padding: 2px;">Attorney Docket Number</td> <td style="padding: 2px;">02-104720US</td> </tr> </table>	Complete if Known		Application Number	09/817,015	Filing Date	March 23, 2001	First Named Inventor	Will m P.C. St mm r	Group Art Unit	Unassign d	Examiner Name	Unassigned	Attorney Docket Number	02-104720US
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CF	REIDHAAR-OLSON ET AL. (1991) "Random mutagenesis of protein sequences using oligonucleotide cassettes." <i>Methods Enzymol</i> 208:564-586.	
CG	REIDHAAR-OLSON ET AL. (1998) "Combinatorial Cassette Mutagenesis as a Probe of the Informational Content of Protein Sequences." <i>Science</i> 241:53-57	
CH	SAKAMAR AND KHORANA (1988) "Total synthesis and expression of a gene for the a-subunit of bovine rod outer segment guanine nucleotide-binding protein (transducin)." <i>Nucl. Acids Res.</i> 14:6361-6372	
CI	SAYERS ET AL. (1988) "Strand specific cleavage of phosphorothioate-containing DNA by reaction with restriction Exonucleases in the presence of ethidium bromide." <i>Nucl Acids Res.</i> 16:803-814.	
CJ	SAYERS ET AL. (1998) "5'-3' Exonucleases in phosphorothioate-based oligonucleotide-directed mutagenesis." <i>Nucl Acids. Res</i> 16:791-802	
CK	SMITH (1985) "In vitro mutagenesis." <i>Ann. Rev. Genet</i> 19:423-462	
CL	TAYLOR ET AL. (1985) "The rapid generation of oligonucleotide-directed mutations at high frequency using phosphorothioate-modified DNA." <i>Nucl. Acids Res.</i> 13:8765-8787	
CM	TAYLOR ET AL. (1985) "The use of phosphorothioate-modified DNA in restriction enzyme reactions to prepare nicked DNA." <i>Nucl. Acids Res.</i> 13: 8749-8764.	
CN	WELLS ET AL. (1985) "Cassette mutagenesis: an efficient method for generation of multiple mutations at defined sites." <i>Gene</i> 34:315-323.	
CO	WELLS ET AL. (1986) "Importance of hydrogen-bond formation in stabilizing the transition state of subtilisin." <i>Phil Trans. R. Soc. Lond.</i> 317:415-423.	
CP	ZOLLER & SMITH (1982) "Oligonucleotide-directed mutagenesis using M13-derived vectors: an efficient and general procedure for the production of point mutations in any fragment of DNA." <i>Nucleic Acids Res.</i> 10:6487-6500.	
CQ	ZOLLER & SMITH (1987) "oligonucleotide-directed mutagenesis: a simple method using two oligonucleotide primers and a single-stranded DNA template." <i>Methods in Enzymol.</i> 154:329-350.	
CR	ZOLLER & SMITH (1987) Oligonucleotide-directed mutagenesis of DNA fragments cloned into M13 vectors. " <i>Methods in Enzymol</i> 100:468-500	

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